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ABSTRACT

In 1974, 1978, and 1980, follow-up surveys of former data processing students were conducted by William Rainey Harper College (WRHC) to help evaluate the data processing program and support curriculum development. The 1974 survey included anyone enrolled between fall 1968 and spring 1973 who had taken any data processing course, while the 1978 and 1980 surveys included only students who completed 15 or more hours in data processing courses. The survey instruments solicited information on student objectives in taking the data processing course(s), exit status from WRHC, participation in a field study project, activities immediately after leaving WRHC, present and prior job and salary, usefulness of WRHC data processing courses on the job, skills that were not developed and should have been, and faculty evaluation. The study findings, based on 48.1% of the 1974 population (N=311), 68.1% of the 1978 population (N=98), and 71.8% of the 1980 population (N=94), include the following: (1) student goals changed significantly over the six years, with more students seeking an associate degree; and (2) the 1980 survey respondents were most likely to work in the data processing field while at WRHC, to enroll in a field experience or case study project, and to obtain a job in the field after leaving WRHC. The study report describes methodology and findings and details survey item responses on a series of tables. The three questionnaires are included. (AYC)

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FOLLOW-UP OF STUDENTS WHO MAJORED IN DATA PROCESSING FROM 1969 to 1980

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ABSTRACT

THE PURPOSE OF THIS REPORT IS TO PRESENT THE RESULTS OF THREE FOLLOW-UP SURVEYS OF FORMER DATA PROCESSING STUDENTS CONDUCTED IN 1974, 1978 AND 1980. THE 1974 STUDY FOLLOWED ALL FORMER STUDENTS TAKING ANY ONE OF SIX SELECT DATA PROCESSING COURSES. THE 1978 AND 1980 SURVEYS FOLLOWED ONLY FORMER STUDENTS WHO HAD PASSED 15 HOURS IN THE DATA PROCESSING FIELD. AFTER AN ORIGINAL MAILING OF THE SURVEY INSTRUMENT, A SECOND MAILING OF THE INSTRUMENT AND A TELEPHONE FOLLOW-UP, RESPONSE RATES OF 48 PERCENT, 68 PERCENT AND 72 PERCENT WERE OBTAINED.

RESULTS OF THIS SYNTHESIS INDICATED THAT A GREATLY INCREASED JOB MARKET DEMAND FOR HIGHER LEVEL DATA PROCESSING SKILLS HAS AFFECTED BOTH THE TOTAL ENROLLMENT IN THE DATA PROCESSING PROGRAM AND THE PROFILE OF THE STUDENTS ENROLLED. ENROLLMENT IS UP SHARPLY AND STUDENTS ENROLLED IN RECENT YEARS ARE MUCH MORE APT TO SEEK AND ACHIEVE A DEGREE OR CERTIFICATE. THESE MORE RECENT STUDENTS WERE ALSO MORE APT TO WORK IN THE DATA PROCESSING FIELD WHILE AT HARPER, TO ENROLL IN A FIELD EXPERIENCE OR CASE STUDY PROJECT AT HARPER AND TO OBTAIN A JOB IN THE DATA PROCESSING FIELD UPON LEAVING HARPER. THE FIELD EXPERIENCE OFTEN LED TO A PERMANENT JOB FOR THE STUDENT. SALARIES OF FORMER DATA PROCESSING STUDENTS HAVE RISEN DRAMATICALLY IN RECENT YEARS AND THE LEVEL OF SKILLS PRACTICED BY THESE RECENT STUDENTS IS VERY HIGH.

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Purpose

The purpose of this report is to present and interpret the results of three follow-up surveys of former data processing students conducted in 1974, 1978 and 1980. The purpose of these follow-up studies was to help evaluate the Data Processing Program and to provide input into the curriculum development and modification process. The follow-up surveys were requested by the coordinator of the Data Processing Program.

Population Surveyed

The populations surveyed were quite different between the earlier study and the last two studies. The 1974 survey was a much more general study including anyone enrolled between the fall of 1968 and the spring of 1973 who had taken any one of Data Processing 108, 110, 202, 204, 210 or 230. The 1978 and 1980 studies were much more specific studies including only students who had passed 15 or more hours in data processing courses. The 1978 study included students enrolled between the fall of 1973 and spring of 1977 who were not enrolled in the fall of 1977. The 1980 study included students enrolled between the summer of 1977 and the spring of 1979 who were not enrolled in the fall of 1979.

After all mail and telephone follow-ups were conducted after the original survey mailing, the following survey completion rates were obtained:

Return Rates of Data Processing Surveys

	1974 Survey		1978 Survey		1980 Survey	
	N	PCT	N	PCT	N	PCT
Completed by mail	166	25.7	45	31.3	61	46.6
Completed by telephone	145	22.4	53	36.8	33	25.2
Subtotal completions	311	48.1	98	68.1	94	71.8
Non-forwardable	335	51.9	18	12.5	30	22.9
Unable to reach by telephone			22	15.2	7	5.3
Refused to answer			6	4.2		
Subtotal of non-completions	335	51.9	46	31.9	37	28.2
Total	646	100%	144	100%	131	100%

The first survey produced the lowest return rate but this was to be expected as many of the students in this more general survey had only a minimum connection with Harper. The last two surveys produced return rates of about 70 percent which is about all that can be expected for students who have been gone for several years. This return rate is adequate to insure that the surveys returned are representative of the entire population identified.

Methodology

The survey instruments shown in the appendix were developed cooperatively by the Office of Planning and Institutional Research and the coordinator of the Data Processing Program. The survey instrument was first mailed to the target population identified in each of the three survey years. After three weeks non-respondents were mailed a second survey instrument. After another three weeks, those still not responding were telephoned and the survey information gathered in this fashion. This report compares the results of the three surveys and interprets the implications of these results.

Discussion of Results

In examining the three surveys taken over the years it is apparent there has been a significant change in the goals of students entering the Data Processing Program. Recently there has been a sharp increase in the percentage of students aiming for an associate degree or certificate as opposed to taking a few courses to upgrade their present position. For example, 65 percent of those in the 1980 survey planned on getting an associate degree as compared to only 45 percent in the earlier surveys. Supporting this is the fact that 48 percent of the 1980 survey population actually attained an associate degree at Harper while less than 25 percent of the earlier survey populations received a degree.

These changes probably reflect the changes in the job market with a critical shortage of employees with higher level data processing software skills. There are several other results from these surveys which reflect this changing job market and high demand for data processing skills. For example, in the recent survey a higher percentage of the 1980 survey sample (67 percent) worked on data processing jobs while attending Harper as compared to the 1978 survey population (60 percent) and the 1974 survey population (47 percent). In addition, a much higher percentage of the students enrolled in field experience training stations or case study projects in the recent survey (50 percent) as compared to the earlier surveys (32 percent and 18 percent respectively). As a result of this, a greater proportion of the 1980 survey population (34 percent) found their present jobs through their field experience at Harper as compared to earlier survey populations (21 percent and 8 percent).

Other indicators also reflected these changing job market conditions. More than three-fourths (76½ percent) of the 1980 survey population found jobs in the data processing field while only 65½ percent of the 1978 survey population and 54 percent of the 1974 survey population became employed in the data processing field. Moreover, a much higher proportion of those recently surveyed (52 percent) felt the professional effect of the data processing curriculum at Harper was to help students find their present job. This compared to only 38 percent and 22 percent of the earlier survey populations who thought Harper's data processing curriculum produced such an effect.

The recent demand for high level software skills is demonstrated by the high level of skills currently practiced by the 1980 survey population on their present jobs. Some 34 percent were now functioning as analysts, 17 percent were programmers and 11 percent were in some type of data processing supervisory role. The jobs of these same students when they first left Harper, of course, at lower levels. The increase in demand for data processing skills were also reflected in the salaries for these positions.

In the 1974 survey the average salary of the former students was $12,500 but this climbed to $16,100 by the 1978 survey and $20,600 by the 1980 survey. When the 1980 survey group first left Harper in 1977, their average salary was $12,400 which was $1,000 above the average salary received by all career alumni leaving Harper that same year. Finally, the increased demand for data processing skills has resulted in huge increases in enrollment in the Data Processing Program. Since the fall of 1972 the enrollment has increased from 94.9 FTE to 457.1 in the fall of 1980; almost a five-fold increase. Even since 1975 enrollment has increased 75 percent.

When asked to evaluate their experiences while at Harper these former students rated the full-time faculty between good and excellent and much higher than the part-time faculty. While the part-time faculty were rated lower in teaching some of the comments indicated they did add another dimension with their practical experience and use of applications. Comments indicated the field experience and case study courses were very useful and helpful. In the evaluation of other courses DPR 108 computer programming COBOL was rated as the most useful. The advanced COBOL and BAL courses were also rated as being very beneficial.

When asked to list skills and competencies they didn't have now but would find extremely useful in their present situation, these former students named knowledge about JCL and OS, presentation communication skills and management skills. When these former students were asked what additional training today's data processing students should receive, frequently mentioned were data base, OS & JCL, teleprocessing, CICS, IMS and structural programming.

Major Conclusions

A greatly increased job market demand for higher level data processing skills has affected both the total enrollment in the Data Processing program and the profile of the students enrolled. Enrollment is up sharply and students enrolled in recent years are much more apt to seek and achieve a degree or certificate. These more recent students were also more apt to work in the data processing field while at Harper, to enroll in a field experience or case study project at Harper and to obtain a job in the data processing field upon leaving Harper. The field experience often led to a permanent job for the student. Salaries of former data processing students have risen dramatically in recent years and the level of skills practiced by these recent students is very high.

DETAILED RESULTS

Follow-up Survey of Former Data Processing Students

Enrollment in the Data Processing Program Over the Years

Fall Of	FTE Enrollment
1972	94.9
1973	128.8
1974	158
1975	260.5
1976	246.7
1977	278.1
1978	309.4
1979	349.8
1980	457.1

Purpose in Enrolling in Data Processing at Harper	1974 Survey PCT	1978 Survey PCT	1980 Survey N	1980 Survey PCT
To get an associate degree in data processing	44.0	45.8	61	64.9
To get a certificate in data processing	7.7	12.5	15	16.0
To take a few courses for upgrading my job	24.8	32.3	10	10.6
To take a course for general interest	23.2	9.4	8	8.5
For draft deferment	.3	0	0	0
Number of responses	311	96	94	
Status Upon Leaving Harper				
Graduated with associate degree	18.9	23.7	45	47.9
Graduated with certificate	1.7	6.7	12	12.7
Graduated with clerical certificate	.3	1.0	0	0
Accumulated 48 or more hours but didn't graduate	10.7	8.3	7	7.5
Accumulated 32 - 47 credit hours	9.7	18.0	10	10.6
Accumulated 16 - 31 credit hours	16.2	26.8	19	20.2
Accumulated less than 16 credit hours	35.2	5.2	0	0
Still enrolled at Harper	7.3	10.3	1	1.1
Number of responses	290	97	94	
Employment Status While Attending Harper				
Full-time job in data processing	37.6	41.2	43	45.7
Part-time job in data processing	9.5	18.6	20	21.3
Employed in a non-data processing field	42.1	29.4	19	20.2
Not employed	10.8	10.8	12	12.8
Number of responses	306	102	94	

Enrollment in DPR 137/230 Field Study/Case Project	1974 Survey PCT	1978 Survey PCT	1980 Survey N	1980 Survey PCT
Worked at a training station	12.7	23.9	33	35.1
Worked on a case project	4.8	7.9	14	14.9
Did not enroll in these courses	82.5	68.2	47	50.0
Number of responses	291	88	94	
What Student Did Immediately After Leaving Harper				
Took a job with same company in which I worked while enrolled in DPR 137 or 230	8.2	21.4	32	34.0
Took a job in data Processing with the same company for which I was working while still at Harper	36.1	24.2	27	28.7
Took a job in the data processing field	9.9	19.9	13	13.8
Took a job outside of data processing with the same company for which I was working while still at Harper	10.9	8.5	7	7.5
Took a job outside the data processing field	10.9	6.1	5	5.3
Continued my education at another college	10.6	14.8	9	9.6
Armed services	2.1	0	0	0
Unemployed	4.1	2.0	1	1.1
Still at Harper	7.2	3.1	0	0
Number of responses	292	98	94	
Total employed in a data processing field	54.2	65.5	72	76.5
Percent whose field experience was DPR 137				26.7
Percent whose field experience was DPR 230				73.3

Job Title	Job Immediately Upon Leaving Harper 1980 Survey N	Job Immediately Upon Leaving Harper 1980 Survey PCT	Present Job 1980 Survey N	Present Job 1980 Survey PCT
Programmer Analyst	4	5.1	20	21.9
Programmer	21	26.9	13	14.3
Computer Operator	11	14.1	6	6.6
Systems Engineer	3	3.8	6	6.6
Designer Analyst	0	0	5	5.5
Systems Analyst	0	0	5	5.5
Data Processing Manager	1	1.3	4	4.4
Financial Director	0	0	3	3.3
Technical Support - Data Processing Operations	0	0	3	3.3
Technical Consultant	0	0	3	3.3
Programmer Supervisor	3	3.8	2	2.2
Computer Software Technical Specialist	1	1.3	2	2.2
Programmer Analyst Trainee	3	3.8	2	2.2
Clerk	0	0	2	2.2
Applications Programmer	3	3.8	2	2.2

Job Title (Continued)	Job Immediately Upon Leaving Harper 1980 Survey N	PCT	Present Job 1980 Survey N	PCT
Systems Hardware Analyst	0	0	1	1.1
Account Executive	0	0	1	1.1
Systems Programmer	1	1.3	1	1.1
Service Manager	0	0	1	1.1
Institutional Aide	0	0	1	1.1
Data Processing Educator	0	0	1	1.1
Service Representative	0	0	1	1.1
Project Leader	0	0	1	1.1
Tool & Die Maker	1	1.3	1	1.1
Interior Designer	1	1.3	1	1.1
Underwriter Assistant	1	1.3	1	1.1
Counterman	1	1.3	1	1.1
Engineer Technician	0	0	1	1.1
Programmer Trainee	13	16.6	0	0
Asst. Service Manager	1	1.3	0	0
Keypunch Supervisor	1	1.3	0	0
Factory Worker	1	1.3	0	0
Instructional Aide	1	1.3	0	0
Data Entry Clerk	1	1.3	0	0
Broadcast Business Manager	1	1.3	0	0
Computer Operator Trainee	1	1.3	0	0
Systems Analyst Trainee	1	1.3	0	0
Assistant Supervisor	1	1.3	0	0
Assistant Controller	1	1.3	0	0
Total	78	100%	91	100%

Type of Employer	Job Immediately Upon Leaving Harper 1980 Survey N	PCT	Present Job 1978 Survey N	PCT	Present Job 1980 Survey N	PCT
Manufacturing	19 1/6	25.6	19	25.7	24½	26.9
Insurance	12 1/6	16.2	15	20.3	15 1/6	16.7
Communication	5	6.7	4	5.4	9½	10.4
Retail trade	6 1/6	8.2	6½	8.8	8 1/6	9.0
Service industry	7	9.3	11½	15.5	6 5/6	7.5
Wholesale trade	2 1/6	2.9	7	9.5	5½	6.0
Petroleum & chemicals	6	8.0	0	0	5	5.5
Transportation	3	4.0	2	2.7	4	4.4
Finance	6	8.0	2	2.7	3	3.3
Education	2	2.7	0	0	3	3.3
Utilities	1	1.3	0	0	2	2.2
Construction	1/6	.2	6	8.1	1 1/6	1.3
Consulting	1	1.3	0	0	1	1.1
Research	2	2.7	0	0	1	1.1
Agribusiness	1/6	.2	0	0	2/3	.7
Government	0	0	0	0	½	.6
Publishing	2	2.7	1	1.3	0	0
Totals	75	100%	74	100%	91	100%

Salary (Taken at time of survey)	Job Immediately Upon Leaving Harper 1980 Survey N	1980 Survey PCT	Present Job 1974 Survey PCT	1978 Survey PCT	1980 Survey N	1980 Survey PCT
Less than $5000	0	0	5.4	0	0	0
$5000 - $6,999	0	0	4.6	1.4	0	0
$7000 - $8,999	9	11.3	14.1	7.1	1	1.1
$9000 - $9,999	9	11.2	11.3	1.4	1	1.1
$10,000 - $11,999	28	35.0	20.9	8.6	4	4.4
$12,000 - $14,999	23	28.7	16.8	32.9	4	4.5
$15,000 - $19,999	8	10.0	20.0	28.6	36	40.0
$20,000 - $24,999	2	2.5	4.6	14.3	31	34.5
$25,000 - $29,999	1	1.3	1.2	2.9	7	7.8
$30,000 - $35,000	0	0	1.1	2.8	3	3.3
Over $35,000	0	0	0	0	3	3.3
Total responses	80	100%	220%	70%	90	100%
Mean salary	$12,356		$12,473	$16,100	$20,589	
Median salary	$11,571		$11,391	$14,870	$19,861	

Career alumni surveys	1976	1978
Mean salary	$10,975	$11,757
Median salary	$10,323	$11,100

Year Began First Job After Leaving Harper	1980 Survey N	1980 Survey PCT
1970	3	5.8
1971	1	1.9
1972	4	7.7
1973	3	5.8
1974	1	1.9
1975	6	11.5
1977	12	23.1
1978	17	32.7
1979	5	9.6
Total	52	100%

Median year started 1977

How Data Processing Courses and Program Helped in Present Situation	1974 Survey PCT	1978 Survey PCT	1980 Survey N	1980 Survey PCT
Helped me get my present job	22.0	37.8	49	52.1
Helped me to perform better on present job	40.4	36.7	38	40.4
No effect	30.0	19.4	10	10.6
Helped me in my present educational situation	7.6	7.1	7	7.4
Question not applicable	-	5.1	3	3.2
Number of responses	250%	98%	94	

Evaluation of Data Processing Courses

Course	1974 Survey Ratio of Most Value Nominations to Least Value Nominations	1978 Survey Average Rating 2 = Great Value 1 = Some Value 0 = Little Value	1980 Survey Average Rank Fifteen Courses Ranked From 1 Most Valuable to 15 Least Valuable
DPR 108 - Computer Prog. - COBOL	5.97	1.52	3.51
DPR 110 - Computer Prog. - BAL	7.31	1.33	3.90
DPR 208 - Computer prog. Adv. COBOL	N.R.	1.47	4.77
DPR 203 - Systems Analysis & Design I	2.33	1.47	5.67
DPR 210 - Computer Prog. Adv. COBOL	8.60	1.60	5.84
DPR 106 - Computer Logic & Technology	N.R.	1.43	6.02
DPR 202 - Programming Systems	6.00	1.56	6.16
DPR 204 - Systems Analysis & Design II	2.39	1.60	6.30
DPR 101 - Introduction to Data Processing	1.48	1.39	8.02
DPR 140 - Report Program Generator	N.R.	1.33	8.07
DPR 150 - Business FORTRAN	2.20	1.60	8.18
DPR 142 - PL/1 Program Language	N.R.	1.33	8.21
DPR 212 - Program, for Mini - Computer	N.R.	1.60	8.34
DPR 135 - Computer Operator	N.R.	1.32	8.79
DPR 103 - Keypunch & Verifying	.37	1.33	10.44
DPR 250 - Data Processing Math II	1.46	1.29	N.R.

Descriptive Rating of Faculty	Numerical Rating	1974 Survey All Faculty PCT	1978 Survey F-T Faculty PCT	1978 Survey P-T Faculty PCT	1980 Survey F-T Faculty PCT	1980 Survey P-T Faculty PCT
Outstanding	4	28.9	41.9	18.0	47.8	17.0
Good	3	28.0	39.5	43.8	33.0	36.4
O.K.	2	7.7	3.5	3.4	6.4	8.0
Mixture	2	28.3	12.8	30.3	12.8	35.2
Unsatisfactory	1	7.1	2.3	4.5	0	3.4
Total responses		297%	86%	89%	94%	88%
Average rating		2.79	3.21	2.75	3.29	2.67

Data Processing Skills & Competencies Which Were Not Developed at Harper Which Could be Helpful to Former Student Now	1974 Survey N	1980 Survey N
More knowledge about JCL	14	43
More knowledge about OS	12	35
Structured analysis & programming		15
Systems analysis	4	12
Systems design		11
Standards of programming & documentation	8	8
On-line maintenance programming - file handling (VSAM, IMS and CICS) - debugging	11	5
Data base communications	3	2
Intro. machine room operations	16	1
Application & group programming short-cuts	9	
Need more languages	8	
Ability to program on tape or disc	4	
Logic	3	
Equipment evaluation	2	
Key punching	2	
Job control	1	
More scientific math applications	1	
Outside experts & speakers	1	
Understanding of a compiler	1	

1980 Survey Only

Communication Skills & Competencies Not Developed at Harper But Which Would Now be Helpful	N
Presentation skills	24
Technical report writing	10
Business report writing	10
Group interaction skills	2
Specification writing	1
Memo writing	1

Business Skills & Competencies Not Developed at Harper But Which Would Now be Helpful	N
Management	26
Accounting	11
Finance	7
Insurance	1

1980 Survey
Additional Training Today's Students Should Receive
to Prepare Them for a Data Processing Occupation

Additional Training	Number of Suggestions	Additional Training	Number of Suggestions
Data base	42	Interactive processing	14
OS & JCL	35	Distributive processing	11
Teleprocessing	30	Data security - privacy	10
CICS	28	TSO	2
IMS	27	Project management	1
Structured programming	21	Installation requirements	1
Structured design	15		

Other Comments About Faculty and Courses

Jean Longhurst is the reason I'm programming today; without her I would never have made it.

The techniques for advanced BAL might be all right, but I've never had the chance to use them, so what good are they? System design was not much help since the only answers the instructor wanted to hear were those that we memorized. We weren't given the chance to be very creative.

My comments have been geared from a programming viewpoint. There should be more courses like DPR 202, that go into operating systems in depth for those who would like to get more technical courses.

Assembler course needs to be restructured to enable the students to learn better.

DPR 101 is a waste of time. The part-time faculty is usually good for about six weeks and then spend the rest of the semester listening to themselves talk about the same topics over and over again.

Some full-time teachers were outstanding, others good to average. Harper's Data Processing Program (as opposed to Oakton) was recommended to me in 1975 by my high school data processing teacher. I feel it was worth even out-of-district tuition.

Curriculum seems to be well organized. It is an excellent idea to require an internship or case study. The internship proved extremely benefical to me.

Any one or more of the items suggested in item number 15 would help a student be placed with a company. The items checked are "State of the Art" and very marketable skills.

Overall curriculum was good.

Full-time faculty loses its contact with the business world.

The evaluation of the part-time faculty does not suggest any incompetence of all members; it merely states that all were not as skilled as the full-time faculty.

The courses most benefical to my career now were taught by Mr. Singelmann who I feel was an excellent instructor.

Evaluation of faculty is based on my experience since leaving Harper. The courses are useful and well presented and full-time faculty are extremely competent. My background could not be duplicated. The more programs a student can write and test, the better. This faculty is not available within reasonable, workable Data Processing programs at most colleges.

A lot of language courses were not helpful because I work on a Honeywell machine.

Harper offered me a strong foundation in principle and concepts. I tell everyone what an excellent program Harper offers. What has helped me most has been the practical applications.

Other Comments About Faculty and Courses (Continued)

I found the instructors were fairly good and they met my particular need except when I got to the bookkeeping course.
They are doing a great job.
Curriculum excellent and very well respected at all places I've interviewed at or been employed with, with respect to other junior colleges.
System analysis & design was "just about" a total waste of time. Part-time faculty was good, but they didn't have much outside time for help. I've been told the logic course format was changed. That was a big mistake because that was the best course I took at Harper.
I feel that in the more advanced courses more emphasis needs to be placed on getting part-time instructors who know how to teach (not just have knowledge of the material).
Get more reliable, competent, interesting and effective part-timers, i.e. people who know how to teach, not just industry "hot-shots".
Like to see this area expanded to include subjects suggested in item number 15.
The average quality of both full and part-time faculty was very high. Part-timers brought practical application to the course.
Harper does not provide enough direct contact with the machines.
Part-time teachers on the most part were good. They seem to put out an effort instead of just putting in their time. Students should get the basic understanding before concentrating on areas such as IMS and CICS.
Thanks to Jay Singelmann for strict enforcement of high standards.
Very good program overall; it might be better if case studies in programming were more realistic - i.e. inventory control, print paychecks, accounts receivable, age analysis etc.
Harper is not really geared toward a job, but really toward more schooling. Unfortunately I found this out too late since most of the stuff taught me was worthless.
Only one out of all my part-time instructors was poor; the rest were excellent. The faculty is good and the part-timers with their work experience were very helpful in actual experience.
I feel Harper has an outstanding two-year program. It gives a solid background in all areas of business. When is it going to become a four-year program?
Students could be taught definitions of the terms listed in item number 15.
Mr. Morrison, who taught me COBOL, was an excellent teacher.

What Additional Workshops or Seminars Former Students Would Attend if Offered at Harper

	N
Data base	7
IMS	6
CICS	5
OS-JCL	4
T.P.	3
Systems analysis	2
Management	2
Just about any depending on the cost	1
Teleprocessing	1
Data processing management	1
Any items in number 15	1
Management - communication workshops, industry trends (hardware, software)	1
CICS and teleprocessing	1
On-line programming	1
Network architecture	1

What Additional Workshops or Seminars Former Students Would Attend if Offered at Harper (Continued)

	N
Minicomputer, financial computer application (budgets, cost accounting)	1
Distributive processing	1
Systems design, project leadership skills	1
Data processing installation	1
A seminar outlining what new items are in the field (yearly)	1
Course defining OS, DOS, CICS	1
Project team management	1

Other Workshops and Seminars Attended at Harper

D.P.M.A. meetings (Student Chapter)
Structured Programming - Gary Shelley

Other Data Processing Workshops and Seminars Attended in Industry

VSAM using AMS
Structured programming
VS2, JCL
Technical report writing concepts
MVS concepts
Structured analysis concepts
VSAM concepts
MVS dumps (JES2)
D.P.M.A. meetings
A lot of in-house training (OS, JCL, DYL 260, VSAM, project management, advanced COBOL)
C lists
Data base
COBOL
Systems analysis
Assembler
CICS
One month programmer analyst training course
Beginning and intermediate MARK IV
IMS application programmming
Introduction to MVS (IBM)
IBM; CICS macro coding
Course pertaining to the systems I am involved with have been on DOS/VSE, VSAM, IBM 4300's etc. unique to the individual shop.
Spectrum
Panvalit workshop
Data base design
Hardware O.P. systems
Teleprocessing
C.C.P.
IMS/VS application analysis, IMS/VS TP application programming, improving communication effectiveness - University of Wisconsin extension and IMS - pansophic systems

Other Data Processing Workshops and Seminars Attended
in Industry (Continued)

DMS (IBM new product)
Data base analysis
IBM - ALC course (assembler language), ASI instructor training course (Bob Didio - "Train the Trainer")
Tape management, TVG seminars, CICS installation, CICS architecture.
CICS macro level, CICS DUMP analysis, utility classes, VSAM courses, project management workshop, skills of management.
DMS internals, operating system internals, hardware architecture, JCL, system performance evaluation, transaction processing internals.
OS, JCL and utility class, seminars on IMS
Time management, OS,JCL and utilities
Tandem school, ranis, debug school
IBM's CICS macro level, teleprocessing seminars
University of Wisconsin extension
Training seminars at DCC division of Data General
IBM course and Burroughs courses
OS, JCL, CICS command level/coding, on-line systems, design, VSPC implementation
IBM customer training

APPENDIX

William Rainey Harper College
Algonquin and Roselle Roads
Palatine, Illinois 60067
312-397-3000

OFFICE OF PLANNING AND RESEARCH
July 18, 1974

Dear Present or Former Data Processing Student:

We need your help!

We are attempting to determine how effectively the Harper College Data Processing program is serving or has served your needs. We need to know how this program could be changed if it is to better serve your needs as well as the needs of future students. Attached is a short questionnaire that will allow us to determine potential needs.

We would appreciate a few minutes of your time to complete this short survey form. Please be assured that we will not identify you with the results of this survey. We have enclosed a stamped, self-addressed return envelope for your convenience. A copy of the completed survey will be made available to you upon request.

If you would like to have more information about the program, please do not hesitate to call either the undersigned or Ray Hylander, Business Division Counselor.

Thank you for your help.

Very truly your,

Gerald J. Mellenthin

Gerald J. Mellenthin
Coordinator
Data Processing Program

Phones: Mr. Mellenthin, 397-3000, ext. 311
Mr. Hylander, 397-3000, ext. 312

Enclosures

FOLLOW-UP SURVEY OF
FORMER DATA PROCESSING STUDENTS

1. What was/is your goal in enrolling in the data processing curriculum while at Harper? Check (✓) one.

_____ A. To take a few courses for an elective or for general interest
_____ B. To take a few courses for upgrading my job situation
_____ C. To get a certificate in data processing
_____ D. To get an associate degree in data processing

2. With what status did you leave Harper? Check (✓) one.

_____ A. Graduated with AAS degree
_____ B. Graduated with 15-hour certificate
_____ C. Graduated with clerical certificate
_____ D. Accumulated 48 or more credit hours but didn't graduate
_____ E. Accumulated 32 to 47 credit hours
_____ F. Accumulated 16 to 31 credit hours
_____ G. Accumulated 15 or fewer credit hours

3. Did you work in the field of data processing while attending Harper? Check (✓) one.

_____ A. Yes, a full-time job
_____ B. Yes, a part-time job
_____ C. No, but I worked in another field
_____ D. No, I didn't work

4. Did you enroll in DPR 230 - Field Study/Case Project? Check (✓) one.

_____ A. Yes, training station (describe type of work and job title)

_____

_____

_____ B. Yes, case project
_____ C. No. List reason why you didn't enroll in DPR 230.

_____

5. What did you do immediately after leaving Harper? Check (✓) only one.

_____ A. Took a job with the same company which provided me a training station while at Harper. (specify job title and employer)

_____

_____ B. Took a job with the same company for which I was working while still at Harper. (specify job title and employer)

_____

_____ C. Took a job in the data processing field (specify job title and employer)_____

_____ D. Took a job out of the data processing field (specify job title employer)_____

_____ E. Continued my education at another college
_____ F. Other (specify)_____

_____

6. Describe your present job

Job Title_____

Employer_____

7. What is your present annual salary? Check (✓) one.

_____ A. Less than $5,000
_____ B. $5,000 - $6,999
_____ C. $7,000 - $8,999
_____ D. $9,000 - $9,999
_____ E. $10,000 - $11,999
_____ F. $12,000 - $14,999
_____ G. $15,000 - $19,999
_____ H. $20,000 - $25,000
_____ I. Over $25,000

8. How did the data processing courses and program at Harper help you in your present job situation? Check (✓) those appropriate.

_____ A. They helped me get my present job (specify how)_____

_____

_____ B. They helped me perform better on my present job (specify how).

_____

_____ C. They have not had any affect on my job or education situation.
_____ D. They have helped me in my present educational situation.
(specify how)_____
_____ E. Question not applicable.

9. Check (✓) those courses which you feel were of most value to you and also check (✓) those courses which you feel were of little value.

Courses which were of most value to you			Courses which were of little value to you
_____	DPR 101	Introduction	_____
_____	DPR 103	Keypunching & Verifying	_____
_____	DPR 108	Computer Programming I	_____
_____	DPR 110	Computer Programming II	_____
_____	DPR 150	Data Processing Math I	_____
_____	DPR 202	Programming Systems	_____
_____	DPR 203	Systems Analysis & Design I	_____
_____	DPR 204	Systems Analysis & Design II	_____
_____	DPR 210	Computer Programming III	_____
_____	DPR 250	Data Processing Math II	_____

10. Describe skills and competencies which were not developed at Harper which could have been helpful to you now or when you first became employed after leaving Harper.

_____

_____

_____

_____

11. What is your overall judgment of the faculty who taught data processing at Harper? Check (✓) one.

_____ A. Outstanding. They really caused me tc learn a lot.
_____ B. Good or about average.
_____ C. Okay. They presented all the required material in a manner that could be understood.
_____ D. A mixture. Some were good, some were okay and some were unsatisfactory.
_____ E. Unsatisfactory. Either only a part of the required material was presented or the material was presented in such a manner that it was hard to understand.

12. Make any specific comments about the faculty, the courses or the relevance of the curriculum that you wish.

_____

_____

_____

_____

If you are a former Harper College student please answer the following question.

13. Are there data processing techniques or skills which you need that Harper College might be able to offer by way of seminars or mini-courses? If yes, please state the topic and the preferred presentation method.

_____

_____

_____

_____

FOLLOW-UP SURVEY OF
FORMER DATA PROCESSING STUDENTS

1. What was/is your goal in enrolling in the data processing curriculum while at Harper? Check (✓) one.

_____ A. To take a few courses for an elective or for general interest.
_____ B. To take a few courses for upgrading my job situation.
_____ C. To get a certificate in data processing.
_____ D. To get an associate degree in data processing.

2. With what status did you leave Harper? Check (✓) one.

_____ A. Graduated with AAS degree.
_____ B. Graduated with 15-hour certificate.
_____ C. Graduated with clerical certificate.
_____ D. Accumulated 48 or more credit hours but didn't graduate.
_____ E. Accumulated 32 to 47 credit hours.
_____ F. Accumulated 16 to 31 credit hours.
_____ G. Still enrolled at Harper.

3. Did you work in the field of data processing while attending Harper? Check (✓) one.

_____ A. Yes, a full-time job.
_____ B. Yes, a part-time job.
_____ C. No, but I worked in another field.
_____ D. No, I didn't work.

4. Did you enroll in DPR 230 - Field Study/Case Project? Check (✓) one.

_____ A. Yes, training station (describe type of work and job title)
_____
_____

_____ B. Yes, case project.
_____ C. No. List reason why you didn't enroll in DPR 230.
_____
_____

5. What did you do immediately after leaving Harper? Check (✓) only one.

_____ A. Took a job with the same company which provided me a training station while at Harper.
_____ B. Took a job with the same company for which I was working while still at Harper.
_____ C. Took a job in the data processing field.
_____ D. Took a job out of the data processing field.
_____ E. Continued my education at another college.
_____ F. Other (specify) _____
_____

6. Describe your present job.

Job Title _____

Industry Type

Agribusiness _____
Service Industry _____
Construction _____
Transportation _____
Communication _____
Utilities _____
Retail Trade _____
Wholesale Trade _____
Manufacturing _____
Finance _____
Multinational Corp. _____
Holding Company _____
Publishing _____
Insurance _____

7. If you are employed full-time, what is your present annual salary?

_____ A. Less than $ 5,000
_____ B. $ 5,000 - $ 6,999
_____ C. $ 7,000 - $ 8,999
_____ D. $ 9,000 - $ 9,999
_____ E. $10,000 - $11,999
_____ F. $12,000 - $14,999
_____ G. $15,000 - $19,999
_____ H. $20,000 - $25,000
_____ I. Over $25,000

8. If employed upon leaving Harper, what was your

Starting Job Title _____

Industry Type

Agribusiness _____
Service Industry _____
Construction _____
Transportation _____
Communication _____
Utilities _____
Retail Trade _____
Wholesale Trade _____
Manufacturing _____
Finance _____
Multinational Corp. _____
Holding Company _____
Publishing _____
Insurance _____

Year began work _____

9. If employed upon leaving Harper, what was your starting annual salary? Check (✓) one.

_____ A. Less than $ 5,000
_____ B. $ 5,000 - $ 6,999
_____ C. $ 7,000 - $ 8,999
_____ D. $ 9,000 - $ 9,999
_____ E. $10,000 - $11,999
_____ F. $12,000 - $14,999
_____ G. $15,000 - $19,999
_____ H. $20,000 - $25,000
_____ I. Over $25,000

10. How did the data processing courses and program at Harper help you in your present job situation? Check (✓) those appropriate.

_____ A. They helped me get my present job (specify how) _____

_____ B. They helped me perform better on my present job (specify how). _____

_____ C. They have not had any effect on my job or education situation.

_____ D. They have helped me in my present educational situation. (specify how) _____

_____ E. Question not applicable.

11. Rank courses in order of most value to least value using a number scale of from 1 to 17. Since there are 17 courses listed, each course listed below should have a different number associated with it.

_____DPR 101 INTRODUCTION TO DATA PROCESSING
_____DPR 103 Keypunching and Verifying
_____DPR 106 Computer Logic and Programming Technology
_____DPR 108 Computer Programming--COBOL
_____DPR 110 Computer Programming--Basic Assembler Language
_____DPR 135 Computer Operator
_____DPR 140 Report Program Generator (RPG Programming)
_____DPR 142 PL/1Programming Language
_____DPR 150 Data Processing Math I
_____DPR 150 Business FORTRAN
_____DPR 202 Programming Systems
_____DPR 203 Systems Analysis and Design I
_____DPR 204 Systems Analysis and Design II
_____DPR 208 Computer Programming - Advanced COBOL
_____DPR 210 Computer Programming - Advanced Assembler Language
_____DPR 212 Programming for the Minicomputer
_____DPR 250 Data Processing Math and Computer Statistics

12. Please check (✓) all skills and competencies listed below which were <u>not</u> developed at Harper which could be helpful to you now or which would have been helpful when you first became employed after leaving Harper.

_____ More knowledge about JCL
_____ More knowledge about OS
_____ Programming and Documentation Standards
_____ Systems Analysis
_____ Systems Design

Communications Skills

_____ Technical report writing
_____ Business report writing
_____ Presentation skills

General Business

_____ Accounting
_____ Finance
_____ Management
_____ Other _____

13. What is your overall judgment of the faculty who taught data processing at Harper? Check (✓) one in each column.

Part-Time Faculty	Full-Time Faculty		
_____	_____	A.	Outstanding. They really caused me to learn a lot.
_____	_____	B.	Good or about average.
_____	_____	C.	Okay. They presented all the required material in a manner that could be understood.
_____	_____	D.	A mixture. Some were good, some were okay and some were unsatisfactory.
_____	_____	E.	Unsatisfactory. Either only a part of the required material was presented or the material was presented in such a manner that it was hard to understand.

14. Make any specific comments about the faculty, the courses or the relevance of the curriculum that you wish.

_____

_____

_____

_____

15. What additional training should today's students receive to prepare them for a data processing occupation? Check (✓) all that apply.

_____ Data Base
_____ IMS
_____ CICS
_____ Teleprocessing
_____ Structured Design
_____ Structured Programming
_____ Distributive Processing
_____ Interactive Processing
_____ OS JCL
_____ Data Security - Data Privacy

16. What data processing seminars, if any, have you attended at Harper?

_____

_____

_____

In Industry

_____

_____

_____

Data processing seminars I would attend if offered at Harper.

_____

_____

William Rainey Harper College
Algonquin and Roselle Roads
Palatine, Illinois 60067
312-397-3000

OFFICE OF PLANNING & INSTITUTIONAL RESEARCH
May 19, 1980

Dear Present or Former Data Processing Student:

We need your help!

We are attempting to determine how effectively the Harper College Data Processing program is serving or has served your needs. We need to know how this program could be changed if it is to better serve your needs as well as the needs of future students. Attached is a short questionnaire that will allow us to determine potential needs.

We would appreciate a few minutes of your time to complete this short survey form. Please be assured that we will not identify you with the results of this survey. We have enclosed a stamped, self-addressed return envelope for your convenience. A copy of the completed survey will be made available to you upon request.

If you would like to have more information about the program, please do not hesitate to call me.

Thank you for your help.

Very truly yours,

Jay Singelmann

Jay Singelmann
Coordinator
Data Processing Program

Phone: Jay Singelmann, 397-3000, ext. 356

Enclosures

FOLLOW-UP SURVEY OF
FORMER DATA PROCESSING STUDENTS

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_____ A. To take a few courses for an elective or for general interest.
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_____ D. To get an associate degree in data processing.

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_____ B. Graduated with 15-hour certificate.
_____ C. Graduated with clerical certificate.
_____ D. Accumulated 48 or more credit hours but didn't graduate.
_____ E. Accumulated 32 to 47 credit hours.
_____ F. Accumulated 16 to 31 credit hours.
_____ G. Still enrolled at Harper.

3. Did you work in the field of data processing while attending Harper? Check (✓) one.

_____ A. Yes, a full-time job.
_____ B. Yes, a part-time job.
_____ C. No, but I worked in another field.
_____ D. No, I didn't work.

4. Did you enroll in DPR 137/230 - Field Study/Case Project? Check (✓) one.

_____ A. Yes, training station (describe type of work and job title)
_____
_____

_____ B. Yes, case project.
_____ C. No. List reason why you didn't enroll in DPR 137/230.
_____
_____

5. What did you do immediately after leaving Harper? Check (✓) one.

_____ A. Took a job with the same company in which I worked while enrolled in DPR 137 or DPR 230.
_____ B. Took a job with the same company for which I was working while still at Harper.
_____ C. Took a job in the data processing field.
_____ D. Took a job out of the data processing field.
_____ E. Continued my education at another college.
_____ F. Other (specify) _____
_____

If your choice was A indicate one of the following:

DPR 137 _____ DPR 230 _____

6. Describe your present job.

Job Title_____

Industry Type

Agribusiness_____
Service Industry_____
Construction_____
Transportation_____
Communication_____
Utilities_____
Retail Trade_____
Wholesale Trade_____
Manufacturing_____
Finance_____
Education_____
Government_____
Publishing_____
Insurance_____
Other_____ Specify_____

7. If you are employed full-time, what is your present annual salary? Check (✓) one.

A. Less than $ 9,999
B. $10,000 - $11,999
C. $12,000 - $14,999
D. $15,000 - $19,999
E. $20,000 - $25,000
F. $25,000 - $30,000
G. $30,000 - $35,000
H. Over $35,000

8. If employed upon leaving Harper, what was your

Starting Job Title_____

Industry Type

Agribusiness_____
Service Industry_____
Construction_____
Transportation_____
Communication_____
Utilities_____
Retail Trade_____
Wholesale Trade_____
Manufacturing_____
Finance_____
Education_____
Government_____
Publishing_____
Insurance_____
Other_____ Specify_____

Year began work_____

9. If employed upon leaving Harper, what was your starting annual salary? Check (✓) one.

A. Less than $ 9,999
B. $10,000 - $11,999
C. $12,000 - $14,999
D. $15,000 - $19,999
E. $20,000 - $25,000
F. $25,000 - $30,000
G. $30,000 - $35,000
H. Over $35,000

10. How did the data processing courses and program at Harper help you in your present job situation? Check (✓) those appropriate.

_____ A. They helped me get my present job (specify how)_____

_____

_____ B. They helped me perform better on my present job (specify how).

_____

_____ C. They have not had any effect on my job or educational situation.
_____ D. They have helped me in my present educational situation. (specify how)

_____

_____ E. Question not applicable.

11. Rank courses in order of most value to least value using a number scale of from 1 to 15. Since there are 15 courses listed, each course listed below should have a different number associated with it. (1 is the most valuable- 15 is the least valuable)

_____ DPR 101 Introduction to Data Processing
_____ DPR 103 Keypunching and Verifying
_____ DPR 106 Computer Logic and Programming Technology
_____ DPR 108 Computer Programming--COBOL
_____ DPR 110 Computer Programming--Basic Assembler Language
_____ DPR 135 Computer Operator
_____ DPR 140 Report Program Generator (RPG Programming)
_____ DPR 142 PL/1 Programming Language
_____ DPR 150 Business FORTRAN
_____ DPR 202 Programming Systems
_____ DPR 203 Systems Analysis and Design I
_____ DPR 204 Systems Analysis and Design II
_____ DPR 208 Computer Programming - Advanced COBOL
_____ DPR 210 Computer Programming - Advanced Assembler Language
_____ DPR 212 Programming for the Minicomputer

12. Please check (✓) all skills and competencies listed below which were not developed at Harper which could be helpful to you now or which would have been helpful when you first became employed after leaving Harper.

_____ More knowledge about JCL
_____ More knowledge about OS
_____ Standards of programming and documentation
_____ Systems Analysis
_____ Systems Design
_____ Structured analysis and programming
_____ Other(specify)_____

Communications Skills

_____ Technical report writing
_____ Business report writing
_____ Presentation skills
_____ Other(specify)_____

General Business

_____ Accounting
_____ Finance
_____ Management
_____ Other(specify)_____

13. What is your overall judgment of the faculty who taught data processing at Harper? Check (✓) one in each column.

Part-Time Faculty	Full-Time Faculty		
_____	_____	A.	Outstanding. They really caused me to learn a lot.
_____	_____	B.	Good or about average.
_____	_____	C.	Okay. They presented all the required material in a manner that could be understood.
_____	_____	D.	A mixture. Some were good, some were okay and some were unsatisfactory.
_____	_____	E.	Unsatisfactory. Either only a part of the required material was presented or the material was presented in such a manner that it was hard to understand.

14. Make any specific comments about the faculty, the courses or the relevance of the curriculum that you wish.

_____

_____

_____

_____

15. What additional training should today's students receive to prepare them for a data processing occupation? Check (✓) all that apply.

_____ Data Base
_____ IMS
_____ CICS
_____ Teleprocessing
_____ Structured Design
_____ Structured Programming
_____ Distributive Processing
_____ Interactive Processing
_____ OS JCL
_____ Data Security - Data Privacy

_____ Other specify_____
_____

16. What data processing seminars, courses and workshops if any, have you attended at Harper?

_____

_____

In Industry

_____

_____

_____

Data processing seminars, courses and workshops I would attend if offered at Harper.

_____

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